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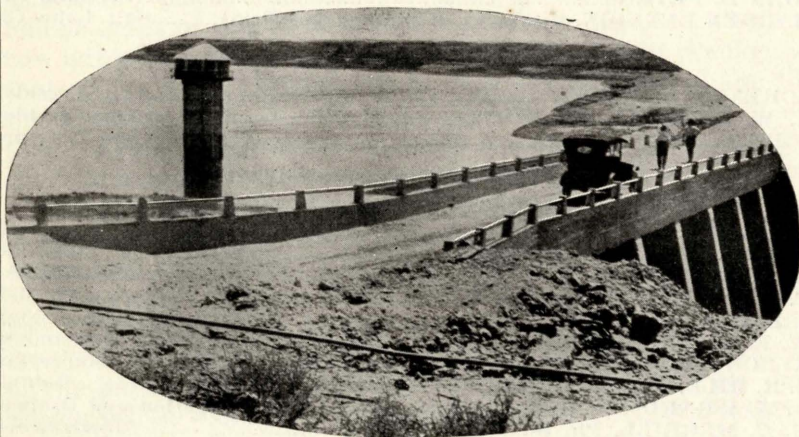
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# LEGISLATION CONCERNING WATER-RIGHTS

By

O. W. ISRAELSEN



CIRCULAR NO. 38

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Utah Agricultural College  
EXPERIMENT STATION

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Logan, Utah

December, 1918

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# LEGISLATION CONCERNING WATER-RIGHTS

By

O. W. ISRAELSEN

## INTRODUCTION

The proper utilization of the agricultural resources of the West is today of greater importance than ever before. It is estimated that not more than 10 per cent of the total area of the West can be irrigated when every drop of available water is economically utilized. In Utah alone there are approximately twelve million acres of arable land, only one million acres of which are now irrigated. Moreover, it is likely that the fullest development that can be made through the most economical use of the total water supply in Utah, will make possible the irrigation of only three to four million acres, or about one-third of the area which could be irrigated if there were plenty of water. That the supply of water is, therefore, the limiting factor of Utah's development is obvious. The immediate future is likely to witness a great increase in the demand for water, both for irrigation and for other purposes. Storage of the flood waters, pumping from underground water sources, driving of artesian wells, improving canal systems, and better preparation of lands for irrigation are some of the important ways in which the demand for a larger water supply will be met. It is particularly significant that all of these ways of increasing our water supply, and also many others, involve water-rights. There is in reality no one factor in irrigation which will have greater influence in future development than that of water-rights.

Men are reluctant to construct reservoirs and canal systems because of the present uncertainty concerning titles to water. They may properly look to the public (1) to advise them definitely as to the amount of unappropriated water, if any, which may be available for use, and (2) for protection against wrongful diversion of properly appropriated water. The growing appreciation of the responsibility of the public in this connection, and the keen interest now manifest in these problems in Utah, have led to the preparation of this circular.

## BASIC WATER-RIGHT DOCTRINES

Use of water for irrigation in the West preceded the enactment of laws pertaining to its use. The pioneer irrigators knew nothing of the laws and customs of other irrigated countries. They found it necessary either to devise new laws in order to meet the



needs of a new environment, or to fit the known laws and customs of the East to surroundings entirely different. Since diversion of waters for agricultural and mining purposes began in some cases before the establishment of government, and nearly always before the enactment of laws relating to water-rights, legislatures have, as a rule, followed well-established practices in making laws pertaining to water-rights.

The influences of environmental factors of the humid and arid regions of the earth on the laws and customs of communities in the different regions are clearly set forth in the following language by R. P. Teele, who for more than twenty years has been conducting special studies in irrigation for the U. S. Department of Agriculture.\*

"In a humid region water for the maintenance of animal and plant life is plentiful; the highest use of the water in streams requires that it remain in the stream for navigation and power, and rights to its use belong naturally to those who have access to the streams—the owners of abutting land. Thus the fundamental idea of the English common law of waters is that the right to use the water of streams attaches to lands abutting on the streams—the riparian doctrine.

"In an arid region the very existence of human habitation depends on the use of the water of streams for domestic purposes and irrigation, and consequently laws developed in arid regions provide for the diversion of water from streams without reference to where it is used. Under the civil law, which developed in an arid region, water belongs to the crown, and rights to its use are obtained by grant.

"As already stated, irrigation began in the arid region of the United States before the existence of any established government. Here the law of necessity governed, and men diverted and used the water of streams without reference to ownership of land, and there grew up the American doctrine of "appropriation." Under this doctrine anyone who will put water to a "beneficial use" may take or "appropriate" it, and the right to continue to take it exists so long as the use continues, provided such use does not conflict with the use by one who made an earlier appropriation from the same source. "First in time, first in right," is the classical statement of this doctrine.

"The water-right laws of the arid region are a conglomerate of these three doctrines."

Careful thought will convince the reader that the *common law*,

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\*Teele, R. P.—"Irrigation in the United States," p. 84-85 (1914). D. Appleton & Co., N. Y.

or the riparian rights doctrine, which asserts that all waters diverted from streams must be returned to the streams *unpolluted in quality and undiminished in quantity* is entirely unsuited to arid regions in which irrigation is the basis of agriculture. It is significant that Utah and each of the adjacent states,—namely,



Fig. 1.—The irrigation states and Agricultural experiment stations.

Wyoming, Colorado, New Mexico, Arizona, Nevada, and Idaho,—the seven interior states which are strictly arid, have long since wholly abrogated this doctrine. The ten other western states which practice irrigation,—namely, California, Oregon, Washington, Montana, North Dakota, South Dakota, Nebraska, Kansas, Oklahoma, and Texas,—have adopted the riparian rights doctrine in a modified form and each of these states, with the possible exception of Montana, has certain areas in which there is sufficient rainfall to produce normal crops without irrigation.

Of the seven states which abrogated the riparian rights doc-



trine, Wyoming, Idaho, and Nevada have made formal declarations that water is the property of the state and that rights may be obtained only by grant. These states have thus followed the idea of the *civil* law. Colorado, Utah, and New Mexico have adopted the theory that all natural waters belong to the public and that rights may be obtained through use.

The distinctions between the declarations that water is the property of the state and that it is the property of the public are apparently not well defined. Certain well-defined distinctions exist, however, between the laws relating to the acquisition and defining of water-rights in the different states.

Although more legislation has been enacted relating to defining of water-rights than to other phases of water-rights control much attention has also been given to devising laws regulating the acquisition of water-rights.

Differences in water-rights legislation with respect to the defining or adjudication of water-rights are particularly important. Three systems of defining rights have been developed. In the first, rights are determined only as they come into controversy, at which time they are defined by the courts; in the second, they are determined by an administrative board whose action is final unless appeal is taken to the courts; and in the third system, an administrative board conducts the preliminary surveys and hearings and issues an order which is first reviewed and then confirmed or rejected by the courts. These systems are more fully discussed under the head "Defining of Water-Rights."

It has been found necessary that the public protect individuals in the enjoyment of rights once established, and legislation covering this phase of the work is said to govern the distribution of water.

Legislation regarding water-rights to be complete must therefore provide (1) a system for governing the acquisition of new water-rights, (2) a system for determining and accurately recording rights which have become vested through the application of water to beneficial use before laws governing appropriations were enacted, and (3) a system of police protection which will insure the distribution of water according to established rights.

#### ACQUIREMENT OF RIGHTS

The irrigators of the West, up to the present, have acquired rights to water under three systems which are, (1) beneficial use only, (2) posting of notices and beneficial use, and (3) application to state officials.

Originally rights were acquired simply by appropriation and use, no public records of any kind being made. Even today many



rights to water rest on use only, not having been recorded on any public record.

As arrigation developed laws were enacted requiring the posting, at points of diversion, of notices stating the amounts of water claimed. Claimants were also required to file copies of such notices with the county recorded or clerk. The weakness of laws asserting that an "appropriator must post a notice in writing in a conspicuous place at the point of intended diversion" was soon recognized by most of the western states, but two states still require posting of notices only.

The inadequacy of the posting of notices is clearly pictured by Dr. Elwood Mead in the following words:\*

"Now usually the conspicuous place where the water is diverted is in some willow thicket, or along the cottonwood-bordered banks in some lonesome bend of the stream, where, as has been said by one writer, "only jack-rabbits and coyotes see the notice so posted. Streams are not diverted in the main streets of populous villages, nor even on the main travelled roads of the country." Ditches of any size may have their heads at a considerable distance up-stream from the place where the water is used in irrigation, because sufficient elevation has to be secured to cover the lands to be watered. Hence few people in the neighborhood where the water is used ever see the notices. Even their display in the post-office, as required in the statutes of Utah, is seen to avail little when one considers the immense area influenced by these claims and the lack of travel across them. From the lowest to the highest ditch on Weber River, in Utah, is a distance of 150 miles."

Even the additional requirement of recording the notices in county records improved the situation but little.† Claims to water from the Missouri River in Montana are recorded in fourteen counties. The Sevier River in Utah irrigates lands in five counties.

The first striking departure from the posting-of-notice procedure was made by Wyoming in 1890. Since that time thirteen other states have adopted the main provisions of the Wyoming law, adding new features as experience suggested. This law is described below after which the new features later adopted by other states are enumerated.

Wyoming is divided into four water districts with a division

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\*Mead, Elwood, "Irrigation Institutions," p. 70.

†Because posting and recording of notices does not give the public sufficient notice of water appropriations, it is gratifying to note that in Arizona and Montana, the only two states which have not adopted a better plan, comprehensive water codes were introduced in 1917, and are likely to be made laws during the 1919 sessions of the respective legislatures.



superintendent at the head of each. The state engineer and the four superintendents constitute a board of control with the engineer as chairman. This board has complete supervision over the waters of the state. All new water-rights obtained after the board was created are granted by it, and to make the records of all rights complete the board was authorized to define and record all rights which had vested, through use or otherwise, before 1890. The Wyoming procedure of acquiring a right is briefly as follows:

- (1) Applicant makes application to engineer for permit to divert and use water, and in the application he must give among other things:
  - (a) Location and description of proposed ditch.
  - (b) Time within which it is proposed to begin construction.
  - (c) Time required to complete construction.
  - (d) Time to apply water to beneficial use.
  - (e) Description of land to be irrigated, if for irrigation.
  - (f) Evidence of financial ability for applications in excess of 25 second-feet, or to reclaim over 1000 acres.
- (2) State engineer must approve all applications except:
  - (a) Where there is no unappropriated water.
  - (b) Where proposed use conflicts with existing rights.
  - (c) Where proposed use threatens to prove detrimental to public welfare, in which case he may reject the application. Approval of application by the state engineer authorizes the applicant to begin construction.
- (3) Applicant must furnish maps prepared in accordance with regulations of state engineer, who may require also plans and profile drawings.
- (4) Applicant must prove to satisfaction of board of control:
  - (a) That actual construction began as required in permit not later than one year from date of approval.
  - (b) That construction was completed as proposed and not later than five years from approval of permit.
  - (c) That proof of application of water to beneficial use was made not later than two years after expiration of time allowed by state engineer for application to beneficial use.\*
- (5) The board of control must issue a certificate showing:
  - (a) Amount of appropriation.

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\*State engineer may limit or extend time for construction or application to beneficial use. Applicant may appeal from action of state engineer to board of control and from board of control to the district court.

(b) Priority number of appropriation.

(c) Date of priority which is also date of filing application in office of state engineer.

With respect to the acquirement of water-rights twelve states have enacted laws following in a general way the Wyoming system above described. The year in which the new legislation was adopted by each state is set opposite the name of the state below:

Nebraska.....	1895	Oklahoma.....	1905	Oregon .....	1909
Idaho.....	1903	North Dakota..	1905	California.....	1913
Utah .....	1903	South Dakota..	1905	Washington....	1917
Nevada .....	1905	New Mexico....	1907	Kansas .....	1917

New features have been added by some of the states, the most important of which are as follows:

The Idaho constitution provides that "the right to divert and appropriate the unappropriated water of any natural stream to beneficial uses, shall never be denied." Because of this fact the state engineer has not been given the authority to reject an application but he must approve all applications which are made in proper form.

Idaho was first to provide by statute a regular procedure for proof of completion of construction and proof of application of water to beneficial use.

Agriculture was made, at the outset, the foundation industry of the settlers of Utah, and because of its dependence on irrigation the need for legislation regarding water-rights was early recognized. That this need for laws governing the control of water resulted in legislation based on sound principles is generally believed by those most familiar with irrigation law. Elwood Mead describes this early legislation and comments on it in the following language:\*

"Colorado and California borrowed their early water laws and customs from the miners: Utah made hers first hand. The system adopted by the territorial legislature at its first session in 1852 contains some of the best features of the highest development of irrigation law as it is now understood. Public ownership of natural resources, including water, was one of the foundation principles of the State of Deseret, and later of the Territory of Utah, as is shown in the following extract from a statute of the first territorial legislature:—

"The county courts shall . . . have control of all timber, water privileges, or any watercourse or creek, to grant mill

\*Mead, Elwood, "Irrigation Institutions," p. 220-222.



sites, and exercise such powers as in their judgment shall best preserve the timber and subserve the interests of the settlements in the distribution of water for irrigation or other purposes. Grants of rights held under legislative authority shall not be interfered with. (Territorial Laws of Utah, Chap. 1, Sec. 38, approved Feb. 4, 1852.)'

"To carry this law into effect, the court of Salt Lake County, then the centre of settlement, passed the following order:—

"'Be it ordered, that it shall hereafter be the duty of all or any persons of this county petitioning this court for any right of canyon or location of county road, or any other privilege which by law is made the right of this court to grant, shall give public notice of their intention by posting up advertisements of the same in three of the most public places in the county at least ten days previous to the sitting of the court at which time the petition is to be presented.'

"This was subsequently amended by requiring the publication of notices at least twice in the 'Deseret News.'

"Under this law the court granted rights to the use of the streams of Salt Lake County, and appointed commissioners to enforce them. When there was doubt as to the advisability of granting any petition the court took testimony, visited the region in question, and satisfied themselves as to the conditions, and either granted or refused the rights, as the facts justified.

"We have here, then, at the very beginning of irrigation development in this country, the recognition of public ownership, the granting of rights by an executive board which was familiar with the facts, and the protection of the rights granted by the board making the grants. Irrigation law has not gone beyond this today, except in the matter of detail."

"Unfortunately for Utah, a law was enacted in 1880 which abandoned the principle of the early law: namely, that the water of streams was public property, and that, in order to obtain a right to it, its owner, the public, must grant the right. Under the 1880 law public ownership seems to have been released and appropriation of water permitted without legal formality. In 1897 Utah further abandoned the distinctive features of its early law and copied the "posting and filing of notices plan" then common to the arid states. During the period from 1880, when Utah abandoned the principle of its early law, till 1903, when the 1890 Wyoming law was adopted, numerous water-rights became vested which have been recorded only as a result of conflicts which have arisen in the courts. Many of the rights so vested have in fact never



been recorded. The practical result of this condition is described thus by Dr. Mead:\*

"So far as the methods of obtaining water rights are concerned, the State (Utah) has gone backward from the position taken in 1852. To-day the individual or company wishing to obtain a water right can nowhere find any complete record of the existing rights, there is no one to whom they can apply to find out whether there is water to be had, or who has authority to approve their taking water or to protect them in its use if they do so. The only method is to build works and take water until someone who is injured, or thinks he is, obtains an injunction from the courts and stops the new appropriation; or until a still later appropriator takes away their water-supply and compels them to appeal to the courts for protection against the later comer.

"In 1901 a law was passed for the appointment of water commissioners to divide the waters of streams among those entitled to their use "according to the prior rights of each," but the water commissioner is in no better situation than the prospective appropriator so far as finding out what are the "prior rights of each" irrigator.

"The valley of the Jordan River in Utah is the birthplace of irrigation on this continent so far as English-speaking people are concerned, and it is there that titles to water ought to be most clearly defined and most stable. The irrigators are largely members of one faith and the foundation of their industrial organization is cooperation. The farmers of this valley have shown exceptional ability in the practical use of water and in the creation of regulations for its economical division from ditches, but an entirely different situation is disclosed when a study is made of the titles to water."

In 1903, when Utah followed the Wyoming law with respect to acquirement of water-rights, two new features of real merit were added: (1) the requirement of a statement in the application of "the time during which it (the water) is to be used each year," and (2) the publishing of the application in a newspaper of general circulation in order to permit persons who anticipate injury to protest the application. The state engineer must approve all applications except where they will conflict with existing rights, or where the court decides that the application is not for the public welfare.

The Utah law provides for completion of construction and application to beneficial use in five and four years, respectively, making a total of nine years, which time may be extended by the

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\*Mead, Elwood, "Irrigation Institutions," p. 224-225.



engineer, at his discretion, not to exceed a maximum of fourteen years.

If all of the counties in Utah had closely followed the State of Deseret Law of 1852, and if the Territory and State had maintained this law until now, there would have been little need, if any, for legislation governing the *defining* of water-rights. However, a large number of rights have vested through use, and the future agricultural welfare of the State rests very much on its making a complete record of all water-rights and to do this it is essential that these early rights be properly defined.

Again if the Wyoming system of granting water-rights had been instituted at the beginning of irrigation in each state, laws governing the defining of rights would never have been necessary, but many rights had become vested in all of the states, through use and otherwise, before any systematic procedure for recording them was devised.

The different legal systems under which these early rights are today being defined will now be considered.

#### DEFINING OF WATER-RIGHTS

There have been up to the present, three systems of defining water-rights developed in the West. The first system developed is generally called the Colorado system; the second, the Wyoming system; and the third, the Oregon system.

For a number of years it has been quite generally believed by students of irrigation that the most significant differences in legislation pertaining to water-rights are those with respect to the defining of vested rights. The most important of these differences under the systems above mentioned are pointed out below:

**Colorado System.**—Colorado was the first of the western states to provide a special procedure for determining water-rights. As early as 1879 and 1881 Colorado provided a system, the essential features of which are:

(1) That every claimant file a sworn statement with the clerk of the district court showing:

- (a) The date of original construction of canals and of use of water.
- (b) The date of enlargement or extension of canal and of irrigated area.
- (c) The amount of water claimed.
- (d) The capacities of canals and ditches.
- (e) The number of acres being irrigated and the number proposed to be irrigated.

(2) That after filing claim one or more persons interested

initiate proceedings in the district court to define the water-rights in question.

(3) That the judge set a day for taking evidence or appoint a referee for such purpose.

Although the early Colorado system was a step in advance at the time devised, it has some vital weaknesses which should now be removed. Most significant of these weaknesses is the fact that the public, which alone represents future appropriators of water, is not represented in the adjudication proceedings. The state engineer to whom the public properly looks for protection of its interests is not mentioned in the act. As a result of this lack of public representation many excess decrees have been granted, both in Colorado and in other states following this system. Quantities of water have been decreed which are not only far in excess of the actual needs of the lands irrigated but also in excess of the carrying capacities of the canals. Not infrequently the total decreed water-rights call for amounts of water several times greater than the average annual flow of the stream considered. A vivid description of these early adjudications is given by Dr. Mead in the following language:\*

"In the earlier adjudications no one knew how much water there was in a stream or how much was needed for an acre of land. When the adjudications were made, some ditches had been completed. A great many had been enlarged since their first construction, and often the owners did not know what the ditch would carry when it was first built, when the enlargement was made, or how much it had been changed. It was difficult for contestants to secure evidence. On a number of streams they did not seek it. The appropriators agreed among themselves as to the amount of water each one would claim, and that they would not dispute the claims of others, the court in such cases giving legal force and effect to an agreed division of public property, which was acquired not to use but to sell."

The "beneficial use" idea seems to have been given no attention in these early decrees, however, in later years it has been considered, although the law has not changed.

It should not be overlooked that even under the Colorado system many of these excess decrees, which were granted over thirty years ago when water was more plentiful and of less value than to-day, are now being modified by the courts to meet the demands of consistent agricultural development. Surplus rights granted in these excess decrees have in many instances been sold at fabulous prices, and consequently every conceivable means of obtaining

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\*Mead, Elwood, "Irrigation Institutions," p. 148.



excess decrees have been sought purely for speculative purposes. Unquestionably the cost which the public has been forced to bear as a result of its permitting adjudications of rights concerning so valuable a natural resource as the waters of western streams, without maintaining a representative to protect its interests, has been so great that definite figures concerning it would be astounding, even to the skeptical mind.

The framers of the Colorado law, and of similar laws in other states, thought that a single adjudication would furnish a permanent basis for division of water. This has not been the case, however, and Mead properly attributes this condition to the fact that the rights established have no relation to actual necessities.

The evils which have resulted from excess decrees are now understood by farmers and lawyers alike. They are forcibly described by Judge Elliott, an ex-justice of the Colorado Supreme Court, in the following terms:\*

"Excess priority decrees are a crying evil in the State. From every quarter the demand for their correction is strong and loud. Such crying demand cannot be silenced by declaring that the meaning and effect of such decrees can never be inquired into, construed, or corrected after four years. In many cases such decrees are so uncertain, so ambiguous, so inequitable, so unjust, and their continuance is such a hardship, that litigated cases will be continually pressed upon the attention of the courts until such controversies are heard and settled, and settled right. Litigation in a free country can never end while wrongs are unrighted."

**Wyoming System.**—In 1886 Wyoming followed with slight modifications the Colorado system of defining water-rights. Adjudications under this law were found to be not only unsatisfactory but also enormously expensive. The chaotic conditions of water-rights which resulted from operation under the law of 1886 made irrigation a very important question at the Wyoming Constitutional Convention of 1890. As a result a general declaration that all streams, lakes and other collections of water were the property of the State, was made a part of the Constitution which also created a special tribunal consisting of the state engineer and four superintendents of water divisions to define water rights and to distribute water to those entitled to its use.

An outline of the procedure adopted for defining water-rights is given below:

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\*Mead, Elwood, "Irrigation Institutions," p. 156.

The board of control through its division superintendent:

- (a) Initiates the action toward adjudication.
- (b) Collects the necessary information concerning size of ditches, flow of streams, and area of land irrigated.
- (c) Sends printed forms to each claimant upon which to make proof of appropriation.
- (d) Collects appropriator's proof of appropriation at time actual survey is made of farms and canals.
- (e) Throws evidence of each appropriation open to inspection of all claimants.

After these things are accomplished by the division superintendent the board issues a certificate of appropriation to each claimant setting forth the date and number of priority, and the amount of water to which the claimant is given title. The amount of water decreed is stated as the amount necessary to irrigate the acreage of land under consideration, not to exceed one cubic foot per second for each 70 acres.

The irrigator, if dissatisfied, may appeal to the district court any time within 60 days after the decree of the board.

**Oregon System.**—The first steps for defining water-rights in Oregon are very much like those in Wyoming. That the action is initiated by petition of one or more of the water users instead of the irrigation board is the chief point of difference. In the last steps of the procedure there is a more important point of difference which is this: The Oregon board does not issue the final decree to the irrigators as the Wyoming board does, but the Oregon law provides that the board file its determination and original evidence with the clerk of the district court, after which the court conducts hearings, reviews the evidence and either confirms or modifies the order of the board.

#### SUMMARY AND DISCUSSION OF SYSTEMS OF DEFINING RIGHTS

In eight states,—Colorado, Idaho, Utah, North Dakota, Oklahoma, South Dakota, New Mexico and Washington,—rights to water, which have vested through beneficial use before laws governing the acquirement of water-rights were enacted, are now being determined by the courts after the necessary physical data are assembled by the state engineer except in Colorado where the state engineer has no connection with the defining of rights.

In three states,—Wyoming, Nebraska, and Texas,—vested rights are defined by an engineering board subject to review by the courts on appeal of the claimant.

In three states,—Oregon, Nevada, and California,—rights are



determined by an engineering board subject to review and consequent confirmation or modification by the courts.

The three additional irrigation states,—Arizona, Montana, and Kansas,—have not yet provided special procedure for the defining of vested water-rights.

That the Colorado system of defining rights, the one which is followed in Utah, is the only one that is legally sound is the chief argument of its advocates. In spite of this claim, however, the Wyoming system has been upheld by the Supreme Courts of Wyoming\* and Nebraska.† The Wyoming court pointed out the relative efficiency of the two methods in the following language:

“As between an investigation in the courts and by the board, it would seem that an administrative board, with experience and peculiar knowledge along this particular line, can, in the first instance, solve the questions involved, with due regard for private and public interests, conduct the requisite investigation, and make the ascertainment of individual rights, with great facility, at less expense to interested parties, and with larger degree of satisfaction to all concerned.”

The Nebraska court called attention to the Wyoming case above mentioned and commented on the Wyoming system as follows:

“The Wyoming statute, from which ours is borrowed, has been subjected to judicial construction and is upheld by the Supreme Court of that state on the express ground that the powers authorized therein are not judicial, but administrative. . . . . With this authoritative construction of the statute, and a decision of the very question raised in the case at bar upon reasoning quite convincing and satisfactory, it would seem that the question should be regarded as at rest. The primary object of the board is for the purpose of supervising the appropriation, distribution and diversion of water. This is obviously an administrative rather than a judicial function.”

That the Wyoming system is legally sound is emphatically argued in the cases just cited.

The Oregon system has several times‡ been upheld by the State supreme Court and was recently sustained by the United States Supreme Court.§ As pointed out above, the Oregon method was designed to overcome the objection that water-

\*Farm Investment Co. v. Carpenter (61 Pac. 266) (1900).

†Crawford v. Hathaway (93 N. W. 781).

‡Pacific Livestock Co. v. Cochran (144 Pac. 668).

†In Re Willow Creek (144 Pac. 505).

§Pacific Livestock Co. v. Lewis (36 Sup. Ct. Rep., 637).

rights should be established only by a regular judicial tribunal. To accomplish this it provides that the findings and evidence of the board be reviewed by the circuit court which then affirms or modifies the order of the board. Both the State and United States Supreme Courts interpret the duties of the board as being analogous to the duties of a court-appointed referee. The United States Supreme Court in discussing this point said:\*

"All the evidence laid before it (the board) goes before the court, where it is to be accorded its proper weight and value. That the state, consistently with due process of law, may thus commit the preliminary proceedings to the board and the final hearing and adjudication to the court, is not debatable. And so, the fact that the board acts administratively and that its report is not conclusive does not prevent a claimant from receiving the full benefit of submitting his claim and supporting proof to the board. That he is to do this at his own expense affords no ground for objection; on the contrary, it is in accord with the practice in all administrative and judicial proceedings."

The above considerations are believed to warrant the conclusion that the Oregon method has been demonstrated to be legally sound.

#### SOME OF THE RESULTS OF DEFINITION OF RIGHTS BY VARIOUS SYSTEMS

Colorado probably ranks first in the number of adjudications made. The temporary character of the decrees issued, as already discussed, may counteract the good results which have been expected from the determinations. Other states have made less progress in defining rights under the Colorado system. It is especially significant that although Utah in 1903 provided a new law for the defining of water-rights, based on the Colorado system, none have been defined under this law in the 15 years which have elapsed since its enactment. The existing situation is clearly described by W. D. Beers, former State Engineer, in the following words:†

"As before stated, we have today no well-defined system of titles, nor can we go to any public records and obtain the amount of vested rights upon any stream. It is evident, then, that water-rights in Utah, for the most part, have grown up outside of the laws which were enacted, and at the present time most of these rights are undefined and unrecorded. This is a great drawback to future agricultural development and conservation of our water supply, and the sooner it is remedied the better for the prosperity

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\*Pacific Livestock Co. v. Lewis (36 Sup. Ct. Rep., 637).

†Ninth Biennial Report of the State Engineer to the Governor of Utah, (1913-1914) p. 27.



of the State. The present irrigation law was enacted to remedy these defects, by defining and adjudicating existing rights, supervising the distribution of the water, and providing a record for all appropriations in the future. The purpose of this law is ideal, but what has it accomplished? It has now been in operation for a period of eleven years. Over \$75,000.00 has been spent in hydrographic surveys on the Weber, Logan, Virgin, San Rafael, and Sevier river systems. The hydrographic survey of the Weber river system has been in the hands of the court since 1908, the Logan river system since 1912. So far not a single water right has been adjudicated as the result of these surveys. Whether this is the fault of the law I cannot say, but it is evident that the law has become inoperative through lack of enforcement."

The situation as described in the report of the state engineer four years ago remains unchanged and is likely so to remain until the legislature provides a more workable system.

The accomplishments under the Oregon Law of 1909 present a remarkable contrast to the Utah situation just described. In 1916 the Oregon State engineer reported\* that adjudications had been completed on 27 streams, on which 3,664 rights were involved, covering an irrigated area of nearly 290,000 acres of vested rights and additional rights partially acquired for over 160,000 acres. Of the 27 streams considered by the board the courts had passed on 17, involving 2,543 rights, or over two-thirds of the total. The rights in Oregon were adjudicated at a cost to the water users of slightly less than \$40,000 or approximately 10 cents an acre.

#### DISTRIBUTION OF WATER

That legislation regarding water-rights must provide an administrative system for protection of established rights, as well as a method for the definition of rights which have vested through use, and also a system for controlling the acquirement of new rights was pointed out at the beginning. So necessary is this phase of water-rights control that many judges in Utah and in other states have on their own responsibility, appointed commissioners to divide the waters in accordance with decrees granted.

Colorado pioneered the way in providing a definite system governing the distribution of water. In 1879 the state divided its irrigated territory into districts, each under the control of a water commissioner. Changing, or in any way interfering with

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\*Sixth Biennial Report of the State Engineer of the State of Oregon, (1915-1916) p. 150.



a headgate was made a misdemeanor punishable by a fine of \$300 or an imprisonment of 60 days, or both. In 1887 the state was divided into four divisions along drainage lines each under a division superintendent. In 1903 the number was increased to five and the man in charge of each was designated as division engineer and paid by the state. Under each division engineer there are a number of water commissioners, each of whom has the responsibility of regulating the headgate of one particular district. If dissatisfied with the actions of the commissioner, an irrigator or canal owner may appeal to the district engineer, and from him to the state engineer. The water commissioners are paid by the local communities which they serve.

Excepting Arizona, Montana, and Kansas, all of the irrigation states have adopted a system of distribution of water designed in general after the Colorado system. The California statute is the least like that of Colorado, simply vesting the power of distributing the water with the water commission under certain limitations. Nebraska has added the only point of real merit: namely, that the water commissioners be paid from state funds. The Utah law differs from the law of Colorado in the fact that the state is not divided into a few large divisions along drainage lines.

#### SOME PROBLEMS WHICH CONFRONT THE LEGISLATOR

There are many problems in water-rights legislation yet to be solved, important among which are 1) a more definite interpretation of the basis of water-rights, (2) the correction of certain tendencies toward wastefulness in the use of water, (3) more extensive investigation of duty of water and other questions in the defining of rights, and (4) systematizing methods and policies in the distribution of water under public authority. A brief discussion of these questions, which should be considered merely as calling attention to them, is given in the following pages.

**Basis of the Water-Right.**—That *beneficial use is the basis, the measure, and the limit* of all rights to use of water has been repeatedly declared by the legislatures and courts in Utah and surrounding states. Except in cases where riparian rights are recognized, the doctrine of beneficial use is likewise well developed in the other western states. Just what constitutes beneficial use has not been fully determined because the problems involved are very perplexing. In recent years courts have frequently used language in water-right controversies which suggests that the



expression "beneficial use"\* in reality means "economical use," and that in the near future it will be replaced by the latter and more appropriate expression.

**Tendency Toward Waste.**—Despite the fact that beneficial use is considered *the basis, the measure, and the limit* of water-rights, actual use of water is frequently unnecessarily wasteful. This wastefulness, moreover, seems to be stimulated by the very laws which say that beneficial use is the basis of water-rights. Farmers frequently irrigate when irrigation is unnecessary and also apply water in excess of actual needs because they believe that such use actually protects their water-rights. This type of use is surely not beneficial in the sense legislatures and courts generally apply the term, but the loose interpretation given the expression by some courts has given rise to this misconception on the part of many irrigators. Western development depends in a great measure on the correction of this misconception. The public, through its legislatures, courts, and other tribunals concerned with the use of water, must interpret the beneficial use doctrine, in such a way that it will stimulate economy among water users; it must also stimulate economy by other means.

**Encouragement of Economy.**—It is generally known that lands which are properly smoothed and leveled can be irrigated adequately with less water than that required on poorly prepared lands. Recognizing this fact, many irrigation companies base water charges on the amount of water used and thus stimulate irrigators to smooth and level their lands. For example, if an irrigator who is paying a total charge of \$2.00 for each acre-foot of water he uses, finds that by the expenditure of \$20.00 an acre in better preparing his land for irrigation, he can produce the same crops on one acre with 2 acre-feet of water that he has been producing with 3 acre-feet, he will at once make the expenditure provided he can obtain the necessary capital at a rate of interest not in excess of 9 per cent per annum. If he can get the money at 6 per cent interest, the \$20.00 expenditure, which will cost him \$1.20 an acre annually in interest, will save \$2.00 an acre in water charges, and thus make a net saving of eighty cents an acre.

It therefore appears that legislatures and courts, by a reasonable interpretation of the beneficial use doctrine, may prevent the present tendency toward waste, and that they may further stimulate economy by encouraging irrigation companies, and other

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\*The following are typical extracts taken from recent decisions of State Supreme Courts, "not what he had used but how much was actually necessary," "largest duty and the greatest use," "necessary when applied by a proper system."



distributors of water, to base water charges, in part at least, on amounts of water delivered to individual users. Under this system of water charges the individual who is thrifty and economical is very properly given a financial reward for his thrift and economy, whereas a rigid application of the beneficial use doctrine to the individual, does not thus reward him for economy in the use of water. The best preparation of land and the best system of irrigation which is warranted by the value of land and water in any community should be made the most economical to the individual irrigator.

**Problems in Defining of Water-Rights.**—It was above pointed out that very few significant differences exist in our present laws pertaining to the acquirement of water-rights, and likewise it was shown that laws governing the distribution of water according to established rights are very similar. The important differences in water-rights legislation, as outlined heretofore, concern the defining of rights which have vested through actual use of water. In this field the legislator of to-day has his greatest opportunity and he has here also a great responsibility. The present laws governing the definition of water-rights are in many states unsatisfactory both from the individual and the public view point. It is now a matter of common knowledge that the duty of water is dependent on many variable factors, and that to obtain satisfactory data concerning it, long-time investigations must be conducted. In spite of this knowledge, however, water-right adjudications are sometimes made on the basis of one season's investigations, which are hurriedly planned, conducted, and reported and which are moreover in many cases planned and reported with one definite proposition in mind: namely, to support the predetermined claim of one of the litigants. Such duty of water investigations are frequently biased from the outset and, even if they were conducted for a long period of time, are open to serious objection.

But even more serious than hastily and inadequately digested experiments is the conflicting testimony with which courts are confronted, testimony which is usually based on questionable memory concerning specific details in a perplexing problem. Frequently much of the testimony thus submitted is of second-hand nature, the original appropriators and users of water having either left the country or died.

Another serious disadvantage of the present system of granting decrees to water is the fact that adjudications once rendered may be opened at any time. The farmer must, therefore, continuously defend his water-right after he has established it. This continuous self-protection is one of the most expensive parts of



his irrigation practice. Some months ago the writer talked to many irrigators who had just paid the cost of one adjudication suit of several years' standing and therefore felt confident that their water-rights were settled and yet in less than one year they were forced into new and expensive litigation.

Every western farmer and statesman of vision recognizes the fact that irrigation development has by no means reached its limits. There will yet be acquired a large number of new rights to water. It is true that most of these rights will permit the use of water only during flood season and many of them will permit only storage, but yet the public must protect the interests of the future appropriators. The responsibility of the public in this connection is so clearly outlined in a Government report on "Irrigation in Utah," part of which contains an examination of adjudications of water-rights on Sevier River by Mr. Frank Adams,\* that the language used by Mr. Adams is here given in full.

"The man who appropriates the last available irrigation stream from the Sevier basin will therefore not be of this generation, but of that of twenty or forty or perhaps one hundred years hence. That man has rights in this basin, because the title to the water he will one day use must have its foundation in the present if not in the past. The only possible representative of the yet unknown appropriator is the public, and that public will one day be called to account for its stewardship. If its trust is mismanaged, the penalty will be a just condemnation of its methods. The first requisite of good management is control of the property to be managed. If the public does not control its property, it can not expect the results of its stewardship to be satisfactory, yet, with the interests of hundreds of future water users in its hands, that public is now exercising absolutely no control over the water of the Sevier. A careful study has failed to disclose one case of litigation on this stream in which the interests of the public were given any protection whatever. If a duty of water was to be determined for any locality, the duty agreed upon by those already using water was the duty adopted by the court; if an entire stream was to be adjudicated, those who happened to be already on the ground were allowed to stipulate a division of the stream among themselves; if a portion of of the water that fell on public lands was, after it had been collected into floods, to be awarded to any individual or company, it was awarded without regard to how it was to be distributed or what relation it should bear to the rights of appropriators farther

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\*Adams, Frank. "Irrigation in Utah," Office of Experiment Stations, U. S. Dept. Agr., Bul. 124, p. 299.



down the stream. The litigation has not protected the rights of the public because those rights are not recognized by law. Yet that such rights exist on the Sevier is as apparent as is the fact that individual rights exist."

Not only is the public responsible to the future appropriator in the matter of protecting his water-right, but it has also the responsibility of attaining through its legislative and court procedure the most definite and most permanent possible condition of water-rights. To make water-right determinations stand the tests of time they must obviously conform as closely as possible to the actual conditions under which they must operate. If a court decrees grants amounts of water far in excess of actual needs, its permanence is properly threatened by the settlers in a community who are desirous of irrigating new lands. Likewise if the decree grants less water than is really needed, the grantees become dissatisfied and do all in their power to have it changed. It is therefore evident that the greatest possible care must be exercised in determining water-rights. Years of painstaking investigations of duty of water may prevent generations of strife concerning the rights in question.

One of the most fruitful sources of trouble is the lack of representation of the public in water-right adjudications. As the water needs have tended to become equal to the low-water stream flow, differences have arisen between irrigators, and after a few seasons of strife they have seen that they must "get together." Consequently, they have decided that each should have a certain part of the total water supply. The total of the parts so allotted have invariably been equal to the stream flow, if indeed not greater than it is, even though the amount given each man were not based on real needs. The result has been the granting of decrees to amounts of water in excess of actual needs. This has been followed by repeated reopening of the decrees, followed by new stipulations which have again resulted in temporary settlement.

This procedure unnecessarily impedes consistent development and also places the first settlers on a stream continuously on the defensive in order to protect their rights and is unsatisfactory to both the individual and the public. That these weaknesses in irrigation institutions with respect to duty of water determinations, unsatisfactory testimony before courts, temporary character of decrees, and lack of public representation in adjudication proceedings and consequent lack of protection of future appropriators, can be overcome by proper legislation is emphatically suggested, if not definitely established, by the activities of administrative boards in Wyoming, Nebraska and Oregon.



**Problems in Distribution of Water.**—Distribution of water under public authority is the goal of legislation concerning water-rights. Public Supervision of the acquirement of new rights and definition of rights which have become vested through use of water are the preliminary steps which make it possible for the public to assure the holders of rights that they will receive the water to which they are entitled. For the purpose of distributing water Colorado early provided an excellent system which, as above pointed out, has been improved as the need for improvements become evident. One weakness of the Colorado system, which has been followed by Utah, is the questionable constitutionality of requiring counties or other local organizations to pay the salaries and expenses of water commissioners who are appointed by the state engineer. Nebraska has removed all question in this connection by providing that the water commissioners be paid by the State. This plan adds to the efficiency of the work and should be followed by other states.

In some of the states, and particularly in Utah, waters are being distributed by commissioners who are appointed by the district courts, because in many localities rights were adjudicated by the courts before special legislation concerning adjudication of rights or distribution of water was enacted. Since one stream system frequently forms part of two or more judicial districts, this plan has resulted in a divided jurisdiction of stream systems, which must be corrected to meet the needs of the present. Placing the responsibility of distributing all waters to which rights have become vested with a central office such as that of the state engineer has the advantages (1) of overcoming divided jurisdiction of streams,\* (2) of obtaining more frequent association among water commissioners and thus stimulating a higher degree of technical training, and (3) of contributing to the urgent need of standardizing methods of water measurement for similar conditions, and of recording and filing of notes and making of reports.

Many water commissioners in Utah today have no record of the amounts of water given to different canals in years past, despite the fact that measurements of the water have been made and that the added expense of keeping the records would have been relatively insignificant. Other water commissioners have fairly systematic records covering many years. If "security is to replace speculation" in water right controversies, and it undoubtedly will, then water commissioners must keep permanent records of deliveries to the water users under their jurisdiction.

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\*Interstate streams are excepted and for these, special reciprocity legislation, such as between California and Oregon is necessary.

## SUMMARY

1. Nearly every available means of increasing the water supply of Utah, and of other western states is in some degree dependent on water-rights, a factor in irrigation that is likely to influence future development more than any other.

2. The common law developed in England asserts that rights to the use of water along a stream naturally belong to the owners of land on its banks, that is, to the riparian owners. The civil law, developed in an arid region, maintains that all waters are the property of the crown and rights may be obtained only by grant. The American doctrine of appropriation maintains that waters are the property of the public to which rights may be obtained by appropriation and use.

3. Legislation concerning water rights, to be complete, must provide for (1) the acquirement of new rights, (2) the defining of rights which have vested through use, and (3) the public distribution of water according to established rights.

4. Rights to water in the West were originally acquired by diversion and use, later by posting notices at points of diversion, and now by application to a central state office, usually that of the state engineer.

5. Applicants for water rights must announce the purpose for which water is to be used, and if for irrigation, they must describe the proposed canals and lands to be irrigated, specify the time necessary to complete construction and use the water, and give other information required by the state engineer.

6. Rights to water which became vested through use before laws governing the acquirement of rights were enacted are now defined (1) by the courts, (2) by administrative boards, and (3) by administrative boards and courts. The first method is called the Colorado system; the second, the Wyoming system; and the third, the Oregon system, because the respective systems were designed and first used in these states.

7. Eight states including Utah follow the Colorado system of defining water-rights; three follow the Wyoming system; three, the Oregon system; and three have not yet provided special procedure for defining water-rights.

8. Advocates of the Colorado system argue that it is the only one that is legally sound, but the Wyoming system has been upheld by the Supreme Courts of Wyoming and Nebraska and the Oregon system has been repeatedly upheld by the Supreme Court of that state and it was recently sustained by the United States Supreme Court.

9. The Colorado system as followed by Utah has been prac-



tically inoperative during a period of fifteen years, although the state engineer has completed surveys on five of the state's chief river systems.

10. The Colorado system of supervising the distribution of water to those entitled to its use, which consists of dividing the state into a few large divisions along drainage lines and dividing each division into the necessary number of districts, has been followed in general by all but three of the irrigated states.

11. If the public were represented in all proceedings for the purpose of defining vested water-rights, and if the definition of rights were based on long-time, painstaking, unbiased duty of water, and other investigations, it is believed that the permanency, or period of endurance, of each decree could be greatly increased and the ultimate cost of litigation thereby decreased, and also that the interests of both the individual and the public would be thereby better protected.

12. Public distribution of water, the goal of water rights legislation, should be improved (1) by making safe and adequate financial provision for the employment of water commissioners, (2) by preventing divided jurisdiction of streams, and (3) by standardizing and keeping permanent and accurate records of water deliveries.

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